PILOT LOCAL GOVERNMENT PARTNERSHIP PROGRAM

POLICY CHOICES IN SERVICE PRICING IN POLAND

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INTRODUCTION

City officials in Poland find themselves facing difficult policy choices with respect to water and wastewater pricing and investment. Considerable capital investment is needed in the sector to protect the health and safety of citizens and to protect the environment. The country is seeking acceptance into the European Union. Before that can happen, it must adopt and comply with European environmental standards. In addition, the public is beginning to demand environmental protection as awareness of potential risks to public health increases.

At the same time, there is pressure to keep water prices low. The notion of recovering investment costs in rates has not been seen as an acceptable alternative to the traditional method of funding utility investments from the state or city budget. There are many competing demands on city budgets from other sectors. In Poland, in particular, as automobile ownership and the use of public roadways increases, citizens are demanding road improvements. Given the choice between funding roads and wastewater treatment, public officials in many municipalities are choosing roads.

The City of Ostrow-Wielkopolski serves as a good case study to illustrate the policy choices facing most Polish cities and their water and wastewater utilities. The city's wastewater treatment plant is inadequate to serve the needs of the city and to provide for environmental protection. Plant capacity is grossly inadequate and the crude technology employed provides only primary treatment. Untreated or inadequately treated wastewater is being disposed of into surface waters. The national government imposes stiff fines on the city calculated according to the composition and quantity of inadequately or untreated water disposed.

City officials identified the following alternative courses of action, none of which they considered acceptable:

- Allow water prices to increase considerably to support construction of the wastewater treatment plant

- Forego planned road improvements in favor of the wastewater treatment plant

- Simply put off construction if the wastewater treatment plant and continue polluting and paying increasingly stringent penalties

In this paper we first provide a brief background of the situation in Poland to provide context for the case study. Next we present the particular circumstances of

Ostrow-Wielkopolski. Finally, we describe the approach taken by advisors working with city and utility officials in seeking a solution to the dilemma facing city officials:

BACKGROUND

Before the break-up of the former Soviet bloc, water utilities in Poland operated under the direction of the central government. City governments were not in the position of having to find funding sources for major utility infrastructure improvements. Infrastructure investment was primarily funded by the central government. Under the centralized system, prices were set at the national level and did not reflect the true cost of providing service—there was no provision for recovery of investment costs and, typically, residential users were subsidized by industry.

In the early 1990's the process of decentralization began, and with it the process of transferring municipal service enterprises to the cities. Municipal governments were granted many new powers and responsibilities, including the tasks of deciding how to best provide municipal services and how the newly transferred municipal service enterprises should be organized, managed and funded. Initially most municipal service enterprises were established as budgetary enterprises, but the sector has undergone significant transformation in recent years. Many cities have restructured their water and sewer enterprises so that they operate as commercial code companies. Most cities still retain majority ownership of the joint stock or limited liability stock companies they created and exercise control through representation on the Board of Directors. Some have retained ownership of assets used in providing service, but have entered into contracts with private firms which manage and operate the utilities. In a few cases, the enterprises have been completely privatized.

There is a considerable backlog of investment needs in the water and wastewater sector in Poland to improve water treatment, replace deteriorating water transmission and distribution systems and wastewater collection systems, and to upgrade wastewater treatment facilities to bring them into compliance with national and European environmental standards.[1]

National and Regional Environmental Funds have been established for the purpose of providing funding for environmental protection projects. Polluters pay fines into the funds and loans with preferential terms are granted based on established priorities.

[1] "Urban Infrastructure and Its Development," by Olgierd R. Dziekonski; Municipal Development Agency; May, 1997

As financial markets have developed, some cities have begun to borrow to fund major capital investment projects. However the municipal bond market is in its infancy and commercial lenders as well as the environmental funds generally provide only relatively short-term financing (four to eight years).

Under current Polish conditions, a number of institutional obstacles to full cost recovery in water and sewer rates exist.[2] Among them are the following:

- There is no formal central regulatory body for reviewing and approving water and sewer prices. Prices for most water utilities in Poland must be approved by City Councils. Laws regulations and pricing methodologies are not well developed or generally understood by city officials charged with approving prices. Naturally elected officials are reluctant to allow the dramatic increases in water and wastewater prices that would be required to enable utilities to fund major capital investment projects from revenues or to afford to service debt.

- The ordinance outlining methods of calculating rates for water supply and sewage disposal allows utilities to include "the estimated annual cost of maintenance and operation of water supply and sewage systems plus a profit margin," but neither maintenance and operation costs nor profit margin are defined. There is some disagreement among experts in the industry as to the extent to which depreciation expense and interest costs can be included as costs.

- The law does not necessarily allow utilities to set rates high enough to cover cash requirements. Inclusion of depreciation expense in costs is not usually sufficient to cover renewal and replacement of assets and principal repayment of loans because (a) with high inflation rates and the need for technological upgrades, new and replacement facilities will be more expensive than those currently on the books of the utility, and (b) principal repayment terms on loans taken to fund construction of new facilities are generally shorter than the depreciable life of the facility.

- Preferential treatment is given to water and sewer utilities which operate as commercial code companies rather than budgetary enterprises. Commercial code companies are allowed to recover both depreciation expense and interest costs in prices, while budgetary enterprises cannot since are not legal entities able to own assets or take out loans.

[2] For a more detailed discussion of water pricing and regulation in Poland: "Setting Prices for Communal Services in Poland," by Matthew D. Glasser, Catherine Revels and Tony Levitas of Research Triangle Institute with the assistance of Krzysztof Chmura; May, 1997 and "Fees for Water Supply and Sewage Disposal as Sources of Public Funding," by Tadeusz Aziewicz, Gdansk Institute of Market Economics; May, 1997.

- Both budgetary enterprises and commercial code companies are subject to income tax on profits at a rate of 38 percent, making it difficult to accumulate funds for expensive, multiyear investment projects.

- There is no standard methodology for calculating connection charges or even a consensus as to whether they should be imposed. In Poland most existing customers did not pay a fee to connect to central water and sewer and many people feel that it would be unfair to impose charges on those who are only now receiving service they should have received many years ago.

THE CASE OF OSTROW-WIELKOPOLSKI

Ostrow-Wielkopolski is a city of approximately 80,000 inhabitants located in western Poland. This relatively small city has been one of the leaders in introducing western municipal finance and management practices and adapting them to Polish conditions. USAID municipal finance advisors working under the Housing Finance and Municipal Advisory Program assisted the city in issuing municipal bonds to finance improvements to its road system and introduced comprehensive capital investment planning. Ostrow-Wielkopolski was among the first Polish cities to receive a loan from the European Bank for Reconstruction and Development (for improvements to the district heating system).

In recent years Ostrow-Wielkopolski has legally restructured all of its municipal service enterprises, including the water and wastewater utility. The enterprise now operates as a commercial code company. The city retains majority ownership of the stock of the utility through a holding company, but it is in the process of taking the company public by issuing shares on the newly formed over-the-counter market. Several years ago, the city obtained a preferential loan form the regional environmental fund to finance construction of a modern water treatment plant so that now potable water is delivered to most residents of the city. At the same time investments were made to improve the transmission and distribution system and install meters for all customers. Water consumption per household fell and water losses were reduced to below 10 percent.

Like many cities in Poland, Ostrow-Wielkopolski needs a new wastewater treatment plant. The current plant is inadequate in terms of both capacity and technology. Only approximately 20 percent of the wastewater collected is treated and the technology employed is outdated, providing only primary treatment. As the sewage collection system is expanded to serve all residents, an increasing amount of untreated or inadequately treated wastewater is being disposed of in local waterways. The city is in violation of national environmental standards and is paying significant penalties to the environmental fund.

Neither the city nor the utility has sufficient funds on hand to pay for expansion of the wastewater treatment plant. The city prepared a capital investment plan and has

prioritized its investment needs. It plans a second issue of bonds to finance road improvements much in demand by the population. The city cannot afford to finance both roads and the wastewater treatment plant at the same time.

Given current price levels for water and wastewater service and the standard lending terms offered by commercial banks and environmental funds in Poland, the utility cannot afford to service a loan from its own sources.

The Mayor of Ostrow-Wielkopolski requested assistance under the Pilot Local Government Partnership Program (Pilot LGPP) in evaluating the financial situation of the water and sewer utility. He clearly articulated the city's policy objective of having all municipal service enterprises move toward funding most of their own capital investment projects without investment subsidies from the city budget.

ASSISTANCE PROVIDED TO THE CITY OF OSTROW-WIELKOPOLSKI

Pilot LGPP enterprise financial advisors have worked with utility financial and operations managers to evaluate the financial capacity of Ostrow-Wielkopolski's water and wastewater utility. A spreadsheet model was applied to develop a ten year projection/business plan for the utility. Inputs to the model include historical financial and operational data, the capital investment plan, financing plans, and macro-economic data. Based on a review of historical trends and discussions with management, projections of customer demand, employment, revenues and expenses were developed. The model is flexible and allows management to evaluate the consequences of various strategies for pricing and financing capital investments.

A first scenario was run to show projected financial results assuming no change in philosophy of rate setting and method of financing capital investments. Under this scenario, rates would increase only with inflation, the utility would borrow to fund capital investments to the extent it could support debt service from its own funds and the short-fall would come from the city budget. The utility planned to borrow from the regional environmental fund under its standard terms: a grace period of one year from the time construction begins, during which only interest would be payable; a loan term of six years; the interest rate tied to the interbank deposit rate (under preferable terms, the rate would be equal to around 50 percent to 60 percent of the rate offered by the National Bank of Poland).

Not surprisingly, the amount required from the city budget under this scenario was much greater than the city planned to invest in water and sewer projects.

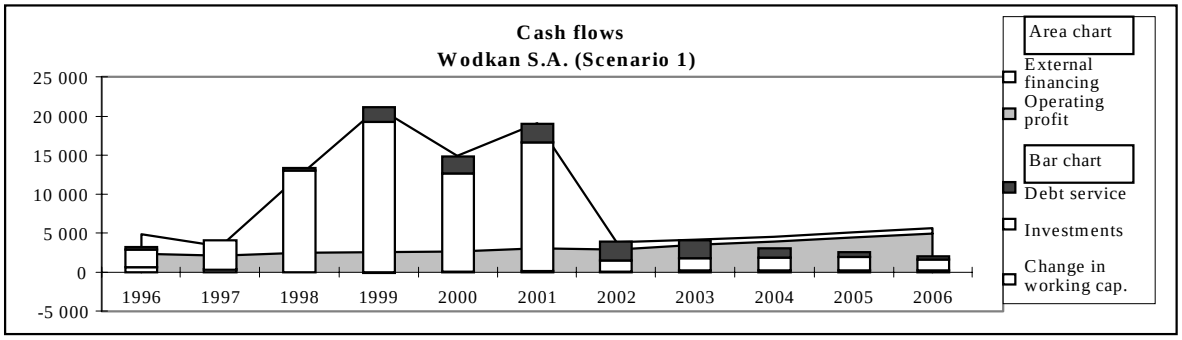
Key results of this first scenario are shown in the following tables and graphs.

Exhibit 1
Summary of Results and Assumptions (Scenario 1)

Summary of results (Scenario 1)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Water price (PLN per cubic meter)	0,75	0,87	0,98	1,09	1,21	1,31	1,41	1,53	1,65	1,78
Price increase (as a percentage over inflation)	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Requirements on the gmina budget	825	3 077	15 900	11 750	13 200	400	0	0	0	0
Debt borrowing	316	364	407	448	493	532	575	621	670	724

Exhibit 2
Cash Flows (Scenario 1)



('000's PLN)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Operating profit	2 372	2 080	2 495	2 535	2 683	3 080	2 952	3 561	3 957	4 441	4 914
External financing	2 533	1 141	9 841	18 507	12 198	15 993	932	575	621	670	724
Change in working cap.	588	316	-3	-75	115	167	74	231	189	215	243
Investments	2 302	3 714	13 013	19 238	12 472	16 484	1 418	1 531	1 654	1 786	1 378
Debt service	350	0	361	1 883	2 236	2 338	2 468	2 272	1 178	626	407

A second scenario was run to determine how much rates would need to increase in order for the utility to afford to borrow to fund most capital investments from its own revenues. The city had identified a relatively small amount of capital investments for water and sewer projects it planned to fund from the city budget and this was included as a source of funds to the utility. The rate increase required under this scenario was very high and was determined to be politically unacceptable and most likely subject to legal challenge as well.

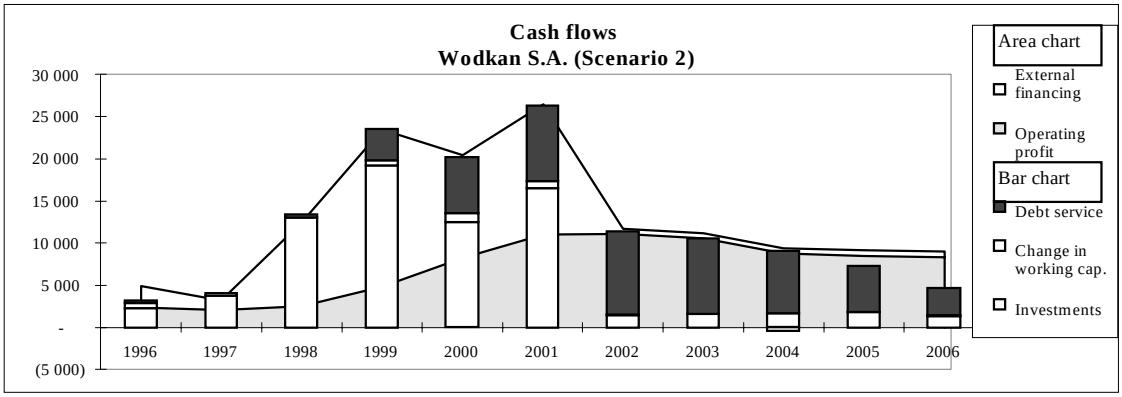
Key results of this second scenario are shown in the following tables and graphs.

Exhibit 3
Summary of Results and Assumptions (Scenario 2)

Summary of results (Scenario 2)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Water price (PLN per cubic meter)	0,75	0,87	1,30	1,87	2,31	2,41	2,37	2,18	2,21	2,25
Price increase (as a percentage over inflation)	6%	0%	36%	33%	13%	-4%	-10%	-16%	-6%	-6%
Requirements on the gmina budget	825	3 077	3 225	3 408	961	0	0	0	0	0
Debt borrowing	0	6 500	15 000	8 400	14 100	0	0	0	0	0

Exhibit 4
Cash Flows (Scenario 2)



('000's PLN)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Operating profit	2 372	2 080	2 498	4 825	8 228	10 951	11 118	10 565	8 790	8 533	8 282
External financing	2 533	1 141	9 941	18 632	12 256	15 554	532	575	621	670	724
Change in working cap.	588	316	-3	594	1 113	893	102	11	-466	42	42
Investments	2 302	3 714	13 013	19 238	12 472	16 484	1 418	1 531	1 654	1 786	1 378
Debt service	350	0	367	3 682	6 657	8 962	9 920	9 054	7 433	5 450	3 209

A third scenario was prepared to test the effects of longer term borrowing by the utility. A ten year term was assumed. Though rates would need to increase at a faster rate than inflation, the required annual increase would be much more reasonable and acceptable.

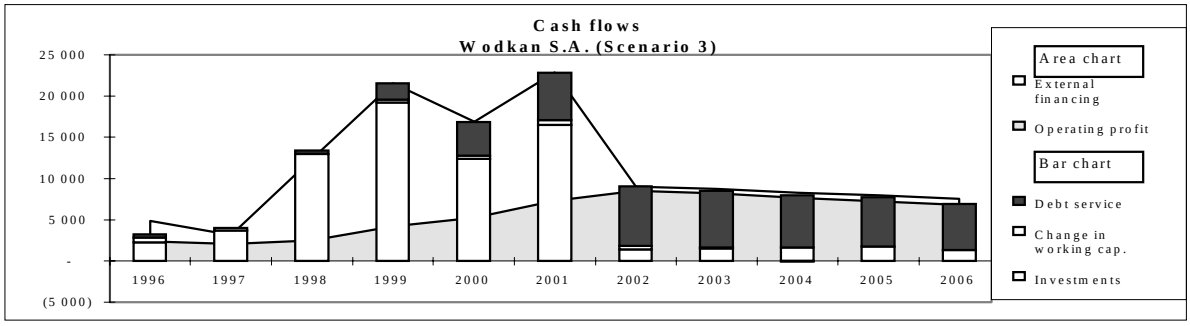
Key results of this final scenario are shown in the following tables and graphs.

Exhibit 5
Summary of Results and Assumptions (Scenario 3)

Summary of results (Scenario 3)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Water price (PLN per cubic meter)	0,75	0,87	1,19	1,38	1,71	1,96	1,98	1,98	1,99	2,01
Price increase (as a percentage over inflation)	6%	0%	24%	5%	13%	6%	-7%	-8%	-7%	-7%
Requirements on the gmina budget	825	3 077	3 225	3 408	961	0	0	0	0	0
Debt borrowing	0	6 400	13 700	7 800	14 100	0	0	0	0	0

Exhibit 6
Cash Flows (Scenario 3)



('000's PLN)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Operating profit	2 372	2 080	2 495	4 211	5 281	7 337	8 492	8 230	7 678	7 280	6 828
External financing	2 533	1 141	9 841	17 332	11 656	15 554	532	575	621	670	724
Change in working cap.	588	316	-3	371	292	631	419	99	-44	-15	-19
Investments	2 302	3 714	13 013	19 238	12 472	16 484	1 418	1 531	1 654	1 786	1 378
Debt service	350	0	361	1 935	4 092	5 747	7 205	6 866	6 299	5 956	5 579

It was agreed that further assistance was necessary in the following areas:

- Work with those providing financing for utility infrastructure projects in Poland, including banks and other financial institutions as well as the environmental funds, to demonstrate the benefits of longer term financing of utility infrastructure—with loan terms more closely approximating the expected useful life of the facility being financed, grace periods equal to the construction period, and level debt service repayment schedules.

- Work with those involved in regulation of water pricing to establish guidelines and methodologies for pricing to provide for recovery of investment costs in prices and a return on investment to shareholders where appropriate.

Pilot LGPP advisors have coordinated with other assistance in the sector provided under the USAID Housing Finance and Municipal Advisory Program for Poland. In mid-May a seminar was held in Warsaw which brought together representatives of cities, utilities, the Chamber of Water Companies, the Office for Protection of Competition and Consumers and other experts working in the industry to discuss the need for a good pricing system, indicators of a good pricing system, the current pricing system in Poland and issues to be resolved. Particular emphasis was placed on the need to provide for recovery of investment costs in rates.

In subsequent workshops the case of Ostrow-Wielkopolski has been used to demonstrate the issues facing water utilities in Poland. A set of proposed pricing guidelines has been developed and presented that would set prices at a level to allow utilities to meet cash requirements and attract outside investment. There seems to be consensus among industry and city officials that without full cost recovery Polish utilities will not be able to afford to make necessary improvements to their systems. The industry association is working with regulators to further develop pricing guidelines

based on those proposed by Pilot LGPP advisors and will present their recommendations in a seminar/workshop in Warsaw in September.

Representatives from financial institutions and environmental funds have attended the workshops and have expressed interest in the enterprise financial model as a means of identifying steps that must be taken to ensure that a utility will be able to repay loans. The National Environmental Fund, in particular, seems willing to evaluate options for longer term financing for utility infrastructure where (a) utilities can prove their ability to repay the loans, and (b) rate covenants are included in agreements so that there is assurance that prices are to be set in accordance with standards that provide for coverage of debt service.

Additional assistance is being provided under the program by an engineering and technical advisor, who is reviewing Ostrow-Wielkopolski's plans for the wastewater treatment plant to determine whether the size and phasing of capacity increments are appropriate, and to make recommendations as to whether cost savings are possible.

CONCLUSIONS

The groundwork has been laid to enable Ostrow-Wielkopolski and other cities in Poland to negotiate more favorable terms for borrowing to fund water and wastewater investment projects. With a loan term that more closely approximates the expected useful life of the facility, a grace period that matches the construction period, and, possibly, a level debt service schedule, the utility will be able to support debt service on the loan from its own revenues, while keeping rates within parameters allowed under current law and at the same time avoiding "rate shock." Ostrow-Wielkopolski's water utility is in the process of preparing its annual justification for a price increase following the principles and guidelines proposed by Pilot LGPP advisors.

With the water utility in a position to service a loan for the wastewater treatment plant from its own revenues, the city will be able to use its budget and debt capacity to fund other high priority capital investments.